UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/524,698	03/14/2000	Alan Tonisson	169.1640	8878

5514 7590 02/23/2005

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER	
AMINI, JAVID A	
ART UNIT	**PAPER NUMBER**
2672	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/524,698	TONISSON, ALAN	
	Examiner	Art Unit	
	Javid A Amini	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 September 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *129,130,132-151,155-176 and 180-186* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

Applicant's arguments filed September 14, 2004 have been fully considered but they are not persuasive.

Applicant on page 34, third paragraph argues that the effective region of an operation is generally not the same as the clipping region of the sub-expression that the operation forms the root thereof. The effective region is usually a proper subset of the clipping region of the sub-expression that is the root of. Examiner's reply: Politis in fig. 22 illustrates that the graphical element 64 (i.e. an effective region) is generally a proper subset of the clipping region, in this case, it covers a whole set of clipping region.

Applicant on page 35, first paragraph argues that in the fig. 4 of Politis does not teach or suggest the clip region for a particular compositing operation node ... Examiner's reply: Fig. 4 of Politis illustrates just compositing operations (i.e. the Venn diagram method).

Applicant on the same page, second and third paragraphs argues the reference Politis does not teach or suggest determining an active region for each of the graphical object nodes, each of the active regions being defined by at least one active region outline comprising at least a portion of the predetermined object outline for the graphical object represented by the particular graphical object node, such that the active region of a particular graphical object is wholly within the particular graphical object. Examiner's reply: Politis in fig. 22 illustrates element 60 as a graphical object that corresponds to Applicant's definition of an active region. The element 60 considered as at least one active region outline. Of course inherently, this active region is wholly within the graphical object.

Applicant on page 36 second and third paragraphs argues that the reference Politis does not teach the determination of an active region for each of the compositing operation nodes. Also Politis does not teach determining a clip region for each of the compositing operation nodes, the clip region for a particular compositing operation node being equal to the intersection of the active region of the particular compositing operation node and the clip region of a parent compositing operation node of the particular compositing operation node. Examiner's reply: Politis in fig. 22 clearly illustrates what applicant broadly arguing on page 36. Applicant uses a broad language to represent explicitly the active and clip regions.

Examiner's comment: Applicant requires presenting explicitly the boundaries of an active region, a clip region and an effective region.

Applicant on page 37, second and third paragraphs argues that the reference Politis's fig. 22 shows a method of combining two graphical elements. Examiner's reply: Applicant in claim 129 line 5 claims "for combining graphical objects". Applicant in third paragraph argues the reference Politis does not teach, "determining a clip region for each of the compositing operation nodes". Examiner's reply: Politis in col. 15 lines 30-40 teaches the step of detecting the clip region and determining of clipped nodes. Applicant emphasizes on detailed compositing operation of Politis that states "if a graphical element is utilized as the left operand of an "in" operation, with an opaque graphical element being the right operand, then clipping involves selecting the visible parts of the left hand operand and only compositing them". Examiner's reply: The above phrases involved the conditions for the graphical element, and one of the compositing operations is the "left operand of an "in" operation". The above phrases would be

broadly similar to "determining a clip region for each of the compositing operation nodes ..." as claimed in the claim 129.

Applicant on page 38, first paragraph argues that the reference Politis does not teach, "... the intersection of the active region of the particular compositing operation node and the clip region of a parent compositing operation node of the particular compositing operation node". Examiner' reply: As mentioned before broadly claiming the claim invention, Examiner refers to see fig. 22 of Politis. For example: take element 60 as an active region and element 61 as a clip region (pay attention to the size of clip 61) and combine them into element 64, the result would be representing the clip region 61 being equal to the intersection of the active region (i.e. shown by dashed line) and the clip region of parent (i.e. shown by a larger square plus a smaller square and a circle), also see in fig. 16 illustrates an expression tree with nodes of circle and box (i.e. square) that each node is intersected by the bounding box of the parent see col. 14 lines 25-42 of Politis.

Applicant on page 38, second paragraph argues the reference Politis does not teach "applying the compositing operations represented by each operation node to the pixels falling wholly within the corresponding effective regions for the operation node to create the image, wherein pixels falling outside the effective regions determined for the expression tree remain uncomposited in creating the image and the structure of the expression tree remains unchanged". Examiner's reply: Politis in col. 6 lines 29-47 teaches any pixel outside the boundary of a graphical element is treated as being fully transparent. This extension of each graphical element is implemented to allow a result to be defined when a pixel is within one operand's normal extent but not the other operand. Additionally, some special operations always require the color to be defined, so fully

transparent pixels take up a color as represented by the zero components in the rendering color space.

Applicant on page 39 last paragraph argues the reference Politis does not teach the step in the last line of the claim 129 " .... the expression tree remains unchanged". Examiner's reply: Politis in col. 3, lines 54-67 teaches also a method of optimizing an expression tree for the compiling of a series of statements in a graphical programming language into a series of lower level instructions, method comprising the steps of: determining candidate nodes of said expression tree utilizing a compositing operator and which are to be composited with opaque objects, storing a list of outlines of said opaque objects, determining a corresponding clipping operation for at least one of compositing operators when used in conjunction with a corresponding opaque object, altering said expression tree so as to define a clipping operation between outline of opaque object and the graphical element represented by candidate nodes, such that clipping operation produces substantially the same result as that produced by compositing two graphical elements together utilizing compositing operator. Examiner's comment: If a person skill in art does not run the method of optimizing, the expression tree remains unchanged.

Examiner's reply to the page 40: The independent claims 133, 156, 158, 181 and 184 recite features similar in many relevant respects to those discussed above with respect to claim 129, and are rejected the same reasons discussed above.

Examiner encourages Applicant to schedule an interview.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 138-145, 163-170, 173-174 recite the limitation "compositing operation node has a complex left operand" in 138-145, 163-170, 173-174. There is insufficient antecedent basis for this limitation in the claim.

Claims 148-149 recite the limitation " complex " in 148-149. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 129, 130, 132-151, 155-176 and 180-186 rejected under 35 U.S.C. 102(e) as being anticipated by Politis US. Patent 5,745,121.

1. Claim 129.

A method of creating a pixel image, the pixel image to be formed by rendering and compositing a plurality of graphical objects according to an expression tree representing a compositing expression for the image, the expression tree comprising a plurality of nodes each representing

one of the objects or a compositing operation for combining graphical object or results of other compositing operations, each of the graphical objects having a predetermined object outline, comprising a plurality of pixels therein, said method comprising the steps of:

Politis in abstract discloses that bounding box methods are used for locating (determining) active areas (region) of graphical elements (objects) from the nodes. The claim languages do not fulfill the method used, since the Applicant and the reference used the Venn diagram method (See the above definition). "Determining an active region for each of the graphical object nodes, each of the active regions being defined by at least one active region outline comprising at least a portion of the predetermined object outline for the graphical object represented by the particular graphical object node, such that the active region of a particular graphical object is wholly within the particular graphical object;"

Politis in figs. 1-3 illustrate two objects 1 and 4 and in fig. 3 area (region) 7 considered (determined) as the active region (intersection) of the two objects, "Determining an active region for each of the compositing operation nodes, said the active region for a particular compositing operation node being equal to the intersection of the active regions of each child node of the particular compositing operation node;"

Politis in fig. 22 illustrates a graphical element 60 is immediately clipped against the borders of graphical element 61 to produce the final output 64, item 64 is an active region. A person skilled in the art could see the similarity in fig. 22 of the reference and the Applicant claim languages, "Determining a clip region for each of the compositing operation nodes, the clip region for a particular compositing operation node being equal to the intersection of the active region of the

particular compositing operation node and the clip region of a parent compositing operation node of the particular compositing operation node;"

Politis in fig. 22 illustrates the effective region (item 64), that is equal to the intersection of the clip region (item 61), and item 64 is considered as a active region. The compositing operations apply to items 60 and 61 (see figs. 1-4 for more detail explanations) and final step is the graphical image on item 64. "Determining an effective region for each of the compositing operation nodes, the effective region for a particular compositing operation node being equal to the intersection of the clip region of the particular compositing operation node and the active regions defined by the active region outlines of the child nodes of the particular compositing operation node; and applying the compositing operations represented by each operation nodes to the pixels falling wholly within the corresponding effective region for the operation node to create the image, wherein pixels falling outside the effective regions determined for the expression tree remain uncomposited in creating the image and the structure of the expression tree remains unchanged". Politis in col. 3, lines 54-67 teaches also a method of optimizing an expression tree for the compiling of a series of statements in a graphical programming language into a series of lower level instructions, method comprising the steps of: determining candidate nodes of said expression tree utilizing a compositing operator and which are to be composited with opaque objects, storing a list of outlines of said opaque objects, determining a corresponding clipping operation for at least one of compositing operators when used in conjunction with a corresponding opaque object, altering said expression tree so as to define a clipping operation between outline of opaque object and the graphical element represented by candidate nodes, such that clipping operation produces substantially the same result as that

produced by compositing two graphical elements together utilizing compositing operator.

Examiner's comment: If a person skill in art does not run the method of optimizing, the expression tree remains unchanged.

2. Claim 130.

Politis in Figs. 30-33 illustrates graphical elements and their corresponding bounding

3. Claim 132.

Politis illustrates in Fig. 3-4.

4. Claim 133.

See rejection of claim 129 for the rejection of this claim.

5. Claim 134.

Politis in Fig. 1, discloses an overlap portion 7 is defined to be a combination of the two elements 1,4 and takes a color value which is dependent on the compositing operators combining the two elements to create a more complex image 6.

6. Claim 135.

Politis illustrates in Figs. 28-29 a push operation is added to the table.

7. Claim 136.

Politis discloses the corresponding compositing expression further region is complex in see (col. 20, lines 4-64).

8. Claim 137.

Politis discloses in (col. 15, lines 64-67 and col. 16, lines 1-5) and equation 1.

9. Claim 138.

Politis in Fig. 4 illustrates the complex left operand by "in".

10. Claim 139.

Politis illustrates in Fig. 23 that pop operation is added to the table.

11. Claim 140.

Politis discloses in Figs. 30-33 and in (col. 12, lines 21-45) The process of bounding box minimization is further designed to find the smallest area portion of each graphical element that is needed to make up the final image. Bounding box minimization extends to finding the smallest area of each internal node of the expression syntax tree to flyer minimizes the number of pixels to be composited.

12. Claim 141.

Politis in Fig. 4 illustrates the complex left operand by "in".

13. Claim 142.

Politis discloses in (col. 10, lines 45-68) pop the graphical element currently on the top of the stack and use it as the operand to the instruction.

14. Claim 143.

Politis in Fig. 4 illustrates the complex left operand by "in".

15. Claim 144.

Politis in Fig. 4 illustrates it.

16. Claim 145.

Politis discloses in Fig. 24 the clip operation added to table.

17. Claim 146.

Politis in Fig. 4 illustrates the complex left operand by "in".

18. Claim 147.

Politis discloses in Fig. 24 the clip operation added to table.

19. Claim 148.

Politis in Fig. 4 illustrates it.

20. Claim 149.

Politis discloses in Fig. 24 the clip operation added to table.

21. Claim 150.

Politis illustrates in Figs. 28-29 a push operation is added to the table.

22. Claim 151.

Politis discloses in Figs. 30-33 and in (col. 12, lines 21-45) The process of bounding box minimization is further designed to find the smallest area portion of each graphical element that is needed to make up the final image. Bounding box minimization extends to finding the smallest area of each internal node of the expression syntax tree to flyer minimizes the number of pixels to be composited.

23. Claim 155.

Politis illustrates in Fig. 3-4.

24. Claim 156.

See rejection of claim 129.

25. Claim 157.

Politis in figs. 17 and 18 illustrates the limitation of the claim languages.

26. Claim 158.

See rejection of claim 129,

27. Claim 159.

A method according to claim 158, wherein each of the clip regions is dependent upon an active region of an operand of a particular compositing operation. Politis in Fig. 1, discloses an overlap portion 7 is defined to be a combination of the two elements 1,4 and takes a color value which is dependent on the compositing operators combining the two elements to create a more complex image 6.

28. Claim 160.

Politis illustrates in Figs. 28-29 a push operation is added to the table.

29. Claim 161.

Politis discloses the corresponding compositing expression further region is complex in (col. 20, lines 4-64).

30. Claim 162.

Politis discloses in Fig. 24 the clip operation added to table.

31. Claim 163.

A method according to claim 158, wherein an active region is determined on the basis that the corresponding compositing operation has a complex left operand. Politis discloses in (col. 15, lines 64-67 and col. 16, lines 1-5) and equation 1. And also see Figs. 3-4.

32. Claim 164.

Politis illustrates in Fig. 23 that pop operation is added to the table.

33. Claim 165.

Politis discloses in Figs. 30-33 and in (col. 12, lines 21-45) The process of bounding box minimization is further designed to find the smallest area portion of each graphical element that is needed to make up the final image. Bounding box minimization extends to finding the

smallest area of each internal node of the expression syntax tree to flyer minimizes the number of pixels to be composited.

34. Claim 166.

Politis discloses in (col. 10, lines 45-68) pop the graphical element currently on the top of the stack and use it as the operand to the instruction. And also see Figs. 3-4.

35. Claim 167.

Politis discloses in (col. 10, lines 45-68) pop the graphical element currently on the top of the stack and use it as the operand to the instruction.

36. Claim 168.

Politis in Figs. 3-4 illustrates it.

37. Claim 169.

Politis in Figs. 3-4 illustrates it.

38. Claim 170.

Politis discloses in Fig. 24 the clip operation added to table.

39. Claim 171.

Politis discloses in (col. 8 lines 34-42) that an "infix" or "expression based" approach where primitive graphical elements may be either operated on directly or stored in variables.

40. Claim 172.

Politis illustrates in Figs. 28-29 a push operation is added to the table.

41. Claim 173.

Politis in Figs. 3-4 illustrates it

42. Claim 174.

Politis discloses in Fig. 24 the clip operation added to table.

43. Claim 175.

Politis illustrates in Figs. 28-29 a push operation is added to the table.

44. Claim 176.

Politis discloses in Figs. 30-33 and in (col. 12, lines 21-45) The process of bounding box minimization is further designed to find the smallest area portion of each graphical element that is needed to make up the final image. Bounding box minimization extends to finding the smallest area of each internal node of the expression syntax tree to flyer minimizes the number of pixels to be composited.

45. Claim 180.

Politis illustrates in Fig. 3-4.

46. Claim 181.

See rejection of claim 129,

47. Claim 182.

Politis illustrates in Fig. 23, that a first method of converting an expression tree to corresponding "intermediate level" instructions. Politis illustrates in Figs. 28-29 a push operation is added to the

48. Claim 183.

Politis discloses in (col. 9, lines 18-21) for each scan line, the expression tree for the output variable is traversed and rendering of each graphical element and compositing operators is performed as relevant to that scan line.

49. Claim 184.

See rejection of claim 129,

50. Claim 185.

The computer readable medium according to claim 184, said medium further storing: code for mapping the effective regions and the compositing operations into a compositing table comprising a plurality of levels, wherein each the level represents at least one compositing operation for rendering an object or parts thereof or represents an outline for clipping at least one other level; and Y code for compositing the image using the compositing table. Politis illustrates in Fig. 23, that a first method of converting an expression tree to corresponding "intermediate level" instructions. Politis illustrates in Figs. 28-29 a push operation is added to the table

51. Claim 186.

The computer readable medium according to claim 184, wherein the compositing operations include compositing and stack operations. Politis discloses in (col. 9, lines 18-21) for each scan line, the expression tree for the output variable is traversed and rendering of each graphical element and compositing operators is performed as relevant to that scan line.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

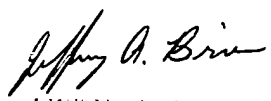
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 703-605-4248. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Javid A Amini
Examiner
Art Unit 2672

Javid Amini



JEFFREY BRIER
PRIMARY EXAMINER